

Notice of Allowability

Application No.

10/019,658

Examiner

Joseph S. Del Sole

Applicant(s)

WATANABE ET AL.

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/1/04.
2. ☒ The allowed claim(s) is/are 3-5.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date attached.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 12/16/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 6/18/04
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Christopher Kent on 6/21/04.

The application has been amended as follows:

cancel claims 1-2.

2. The claim listing is now as such:

Claims 1-2. (cancelled)

Claim 3. (Previously Presented) An apparatus for manufacturing stiffness-taper tubing comprising:
a die having an extrusion hole,
a die holder for holding said die, and
a mandrel which is mounted inside said die holder and fits in said extrusion hole, and which forms stiffness-taper tubing by switching between and supplying resins having different stiffnesses over said mandrel from a plurality of resin-supply ports that are formed in said die holder such that the stiffness gradually changes in the lengthwise direction,

wherein a mandrel insertion hole that connects to said extrusion hole is formed in said die holder and said mandrel is mounted in this mandrel insertion hole, and said

plurality of resin-supply ports open up to a cylindrical space that is formed between the inner surface of said mandrel insertion hole and the outer surface of said mandrel at a position that is separated from the extrusion hole in said die, and the plurality of resins flow together in this cylindrical space, and

wherein said mandrel in said mandrel insertion hole is formed like a screw having a thread which gradually becomes lower as the thread advances forward.

Claim 4. (Previously Presented) The apparatus for manufacturing stiffness-taper tubing of claim 3, wherein said mandrel in said mandrel insertion hole is a multi-thread screw that is formed such that the screw grooves are divided up at a plurality of positions by forming threads, that form said screw grooves, that stop part way and new threads start at an adjacent offset position, and

wherein the height of said threads gradually becomes lower as the threads advance forward.

Claim 5. (Previously Presented) The apparatus for manufacturing stiffness-taper tubing of claim 3 in which said screw has a first thread and a second thread, and wherein an end of the first thread offsets and partially overlaps with an end of the second thread.

3. The following changes to the drawings have been approved by the examiner and agreed upon by applicant: **a)** Figures 1 through 7 must be labeled as --Figure 1-- (or 2 through 7 as appropriate), currently each Figure is labeled with only a number and a non-English character. In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

Allowable Subject Matter

4. The following is an examiner's statement of reasons for allowance: the prior art of record fails to teach or suggest an apparatus having a mandrel mounted inside a die holder and the die holder holding a die; wherein the mandrel receives material from a plurality of resin-supply ports formed in the die holder; wherein the mandrel in the mandrel insertion hole is formed like a screw having a thread which gradually becomes lower as the thread advances forward.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Information Disclosure Statement

5. The information disclosure statement filed 12/6/03 complies with the provisions of 37 CFR 1.97, 1.98 and MPEP 609. It has been placed in the application file and the information referred to therein has been considered as to its merits. The Examiner notes that document 3,752,617 has been crossed out because it has already been indicated as considered as part of the IDS of 1/2/02.

Drawings

6. The drawings change to Figure 7 was received on 6/1/04. This drawing change is acceptable.

Correspondence

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Joseph S. Del Sole whose telephone number is (571)

Art Unit: 1722

272-1130. The examiner can normally be reached on Monday through Friday from 8:30 A.M. to 5:00 P.M.

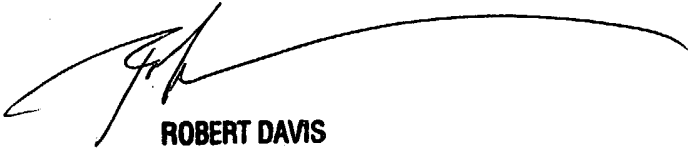
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Wanda Walker, can be reached at (571) 272-1151. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for both non-after finals and for after finals.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from the either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).

Joseph S. Zeele

J.S.D.

June 21, 2004


ROBERT DAVIS
PRIMARY EXAMINER
GROUP 1300 / 700

6/23/04